

# Atti della Società Italiana di Scienze Naturali e del Museo Civico di Storia Naturale di Milano

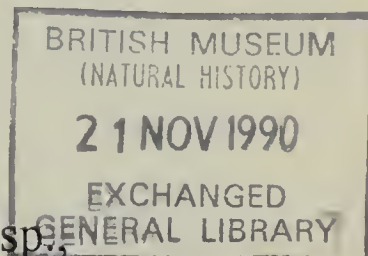
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## Studies on Permo-Trias of Madagascar - n. 2

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### *Palaeoaphrodite anaboranoensis* n. sp., a new species of polychaete annelid from the Lower Trias of Madagascar



**Abstract** – Here follows the description of the new species of polychaete annelid *Palaeoaphrodite anaboranoensis* (Phyllodocida, Aphroditidae) found in the shales the from Eotrias of NW Madagascar.

**Resumé** – *Palaeoaphrodite anaboranoensis* n. sp., nouvelle espèce d'annélide polychète du Trias inférieur de Madagascar. On décrit la nouvelle espèce d'annélide polychète *Palaeoaphrodite anaboranoensis* (Phyllodocida, Aphroditidae) trouvée dans les schistes argileux de l'Eotrias du Nord-Ouest de Madagascar.

**Riassunto** – *Palaeoaphrodite anaboranoensis* n. sp., nuova specie di anellide polichete del Trias inferiore del Madagascar. Viene descritta la nuova specie di anellide polichete *Palaeoaphrodite anaboranoensis* (Phyllodocida, Aphroditidae) rinvenuta negli scisti argillosi dell'Eotrias del Madagascar nordoccidentale.

**Key-words** – Fossil aphroditid, Eotrias, NW Madagascar.

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Fig. 1 — *Palaeoaphrodite anaboranoensis*, holotypus ( $\times 4.6$ ), n. cat. MSNM 8470 Museo Civico di Storia Naturale di Milano. Photograph by L. Spezia, Museo di Storia Naturale, Milano.

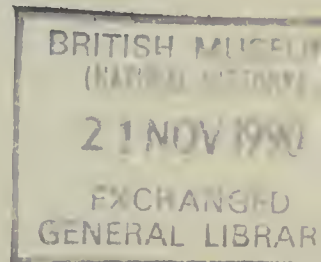
## Introduction

This is the description of a polychaete annelid found in the Eotrias of the Ankitokazo basin (NW Madagascar). This work is part of a series of studies on the Lower Triassic fauna of the Ambilobè region (Diego Suarez, NW Madagascar), which are being carried out at the Palaeontology Section of the Museo di Storia Naturale of Milan. It concerns a fossiliferous belt outcropping in SW-NE direction and about 120 Km long. It is well known in the scientific literature especially for its ichthyofaunas, which have been the subject of numerous studies made especially by French palaeontologists (cf. Lehman, 1952 and Beltan, 1968). The fossils are included in ferruginous nodules contained in the shales of Eotrias, that in the geological literature about Madagascar are defined as «Couches a poissons et ammonites». They can be ascribed to the Lower Scythian on the basis of ammonite faunas and of the homologies between ichthyofaunas and the fauna of the Lower Triassic of Greenland (for a general summary on the fauna, see Besairie, 1972).

In addition to fishes and ammonites, the Lower Triassic fauna of Ambilobè region features bivalves, decapod crustaceans, thylacocephalans (Arduini, 1990), and soft-bodied vermiform organisms; the latter are often preserved as empty three-dimensional casts or as casts filled with shapeless ferruginous material. In the soft-bodied fraction of this fauna, the presence of holoturians has already been recorded (Vaillant Couturier Treat, 1934).

The specimen here examined is preserved as an imprint in iron oxides on one of the halves of an ellipsoidal nodule.

Phylum Annelida Lamark, 1809  
 Class Polychaeta Grube, 1850  
 Order Phyllodocida Dales, 1963  
 Superfamily Aphroditacea Fauchald, 1977  
 Family Aphroditidae Savigny, 1818  
 Genus *Palaeoaphrodite* Alessandrello & Teruzzi, 1986



## *Palaeoaphrodite anaboranoensis* n. sp.

*Derivatio nominis*: name from the place of its discovery, the village of Anaborano (NW Madagascar).

*Holotypus*: *Palaeoaphrodite anaboranoensis*, Museo di Storia Naturale di Milano, n. cat. MSNM/i8470.

*Age*: Scythian.

*Locus typicus*: Anaborano (Ambilobè region, NW Madagascar), Ankitokazo basin.

*Diagnosis*: small fusiform aphroditid with simple setae grouped in tufts. No presence of aciculae.

## Description

Only the imprint of the specimen under examination is preserved; it features a fusiform body, which is not fully preserved in the front part. The total length of the specimen is 24 mm, whereas the maximum width in the median part of the body is 15 mm.

There are no longer traces of soft elements, such as the body contour, gills and cirri, and also the imprint of the alimentary canal is not visible. On the two sides of the body, along its full length, one can clearly see the setae grouped in tufts; these total 14 pairs on each side. No trace of the original metamerism is preserved, though its presence can be suggested by the arrangement in pairs of the setae tufts: two pairs on each metamere. These setae, all of which are about 1/10 mm thick, have a length in the range 3-7 mm. The shortest setae belong to the last two tufts at the extreme body end.

In the insertion points of the setae tufts, it is possible to observe some protuberances that might correspond to the notopodial ramus of the parapodium. Indeed such tufts, that are symmetrically directed towards the body back, lie over another sequence of setae tufts, of which one can see only the distal extremities. These setae represent the neuropodial tufts.

### Comparisons

The subdivision of the body in metameres and the presence — on the body sides — of numerous setae make us believe without doubt that the specimen under examination belongs to polychaete annelids. The general body characteristic enable us to attribute it to the superfamily Aphroditacea, whereas the arrangement of setae in large tufts suggests it belongs to the family Aphroditidae. The comparison with the only known genus of fossil aphroditid, i.e. *Palaeoaphrodite* Alessandrello & Teruzzi, 1986, from the Upper Triassic of Ponte Giurino (Bergamo, Italy) shows a strong similarity with the specimen concerned, specifically in the general morphology of the body and in the layout of setae tufts. However the type-species *Palaeoaphrodite raetica* Alessandrello & Teruzzi, 1986 differs from the specimen described in this context because of the presence of small elytra and strong aciculae; in fact there is no sign of them in the organism under examination.

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